

## NOV 1 0 2005

## **Summary of Safety and Effectiveness**

As required by 21 CFR, part 807.92

Submitted By: Inovise Medical, Inc.

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Steve Hesler Contact:

Director, Quality and Regulatory

Date Prepared: May 30, 2005

Proprietary

Name:

**Extended Measurements AUDICOR System** 

Common/ Usual Electrocardiograph

Name:

Classification: 870.2340, 74 DPS

Performance

AANSI/AAMI EC 11

Standards:

Intended Use:

The Extended Measurements System, when used with AUDICOR Sensors on the chest wall, is intended for use in acquiring, analyzing and reporting ECG and heart sound data and to provide interpretation of the data in an integrated COR report for consideration by physicians. In addition the data can be presented in the format of real-time and trended display of cardiac indices derived from simultaneous ECG data and heart sounds data.

The Extended Measurements System can be used as an add-on device to work in conjunction with an AUDICOR-enabled device, or as a stand-alone electrocardiograph.

The interpretations of ECG and heart sound data offered by the device are only significant when used in conjunction with physician over read as well as consideration of other relevant patient data.

The device is intended for use only under the direct supervision of a physician, and is for use on adults (> 18 years).

Device Description: The Extended Measurements System is a software-based device that that can be installed into a compatible computer to communicate with an AUDICOR-capable device via a Blue tooth interface. The Extended Measurements system will also be offered as a stand-alone electrocardiograph/ monitoring device.

Test Summary & Conclusion: The Extended Measurements System was tested to the applicable requirements of the following standards, and shown to comply.

- ANSI/AAMI EC-11 Standard for Diagnostic Electrocardiographic Devices
- EN 60601-1 (UL 60601-1) Standard for Medical Electrical Equipment: General Requirements for Safety
- EN 60601-1-2 Standard for Medical Electrical Equipment Part 1-2: General Requirements for Safety - Collateral Standard: Electromagnetic Compatibility -Requirements and Tests
- IEC 60601-2-25 Medical Electrical Equipment Part 2: Particular requirements for the safety of electrocardiographs

Inovise Medical, Inc.

Extended Measurements Modification to AUDICOR® 200 System 510(k) Submission

Substantial Equivalence:

The Inovise Medical Extended Measurements System is substantially equivalent to the AUDICOR® 200 system (K043074, cleared as Liberty).

Technological Characteristics:

The Extended Measurements System and the AUDICOR predicate device are technologically equivalent in that both acquire 12 lead ECG and heart sounds data from adult patients then present the data in the COR report format which includes graphic display of MI and LVH conditions along with detection and display of S3 and S4 heart sounds.

The Extended Measurements System adds the capability of displaying and monitoring cardiac indices derived form the ECG and hearts sounds information. These indices include:

- Left Ventricular Systolic Time (LVST)
- Left Ventricular Diastolic Time (LVDT)
- Pre-atrial Diastolic Filling Time (PADT)
- Accelerated Atrial Filling Time (AAFT)
- QS1 (EMAT)
- QS2
- R-R Interval
- S3 Evidence
- S4 Evidence
- S1 Intensity
- S2 Intensity
- S1/S2 Intensity Ratio



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Food and Drug Administration 9200 Corporate Boulevard Rockville MD 20850

Mr. Steve Hesler Director, Quality and Regulatory Inovise Medical Inc. 10565 SW Nimbus Ave, Suite 100 Portland, OR 97223-4311

Re: K051450

Trade Name: AUDICOR® Extended Measurements System

Regulation Number: 21 CFR 870.1875 Regulation Name: Electronic Stethoscope

Regulatory Class: Class II (two)

Product Code: DQD Dated: May 31, 2005 Received: June 2, 2005

Dear Mr. Hesler:

We have reviewed your Section 510(k) premarket notification of intent to market the device referenced above and have determined the device is substantially equivalent (for the indications for use stated in the enclosure) to legally marketed predicate devices marketed in interstate commerce prior to May 28, 1976, the enactment date of the Medical Device Amendments, or to devices that have been reclassified in accordance with the provisions of the Federal Food, Drug, and Cosmetic Act (Act) that do not require approval of a premarket approval application (PMA). You may, therefore, market the device, subject to the general controls provisions of the Act. The general controls provisions of the Act include requirements for annual registration, listing of devices, good manufacturing practice, labeling, and prohibitions against misbranding and adulteration.

If your device is classified (see above) into either class II (Special Controls) or class III (PMA), it may be subject to such additional controls. Existing major regulations affecting your device can be found in the Code of Federal Regulations, Title 21, Parts 800 to 898. In addition, FDA may publish further announcements concerning your device in the <u>Federal Register</u>.

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Please be advised that FDA's issuance of a substantial equivalence determination does not mean that FDA has made a determination that your device complies with other requirements of the Act or any Federal statutes and regulations administered by other Federal agencies. You must comply with all the Act's requirements, including, but not limited to: registration and listing (21 CFR Part 807); labeling (21 CFR Part 801); good manufacturing practice requirements as set forth in the quality systems (QS) regulation (21 CFR Part 820); and if applicable, the electronic product radiation control provisions (Sections 531-542 of the Act); 21 CFR 1000-1050. This letter will allow you to begin marketing your device as described in your Section 510(k) premarket notification. The FDA finding of substantial equivalence of your device to a legally marketed predicate device results in a classification for your device and thus, permits your device to proceed to the market.

If you desire specific advice for your device on our labeling regulation (21 CFR Part 801), please contact the Office of Compliance at (240) 276-0120. Also, please note the regulation entitled, "Misbranding by reference to premarket notification" (21 CFR Part 807.97). You may obtain other general information on your responsibilities under the Act from the Division of Small Manufacturers, International and Consumer Assistance at its toll-free number (800) 638-2041 or (301) 443-6597 or at its Internet address <a href="http://www.fda.gov/cdrh/industry/support/index.html">http://www.fda.gov/cdrh/industry/support/index.html</a>.

Sincerely yours,

Bram D. Zuckerman, M.D.

Director

Division of Cardiovascular Devices

Office of Device Evaluation

Center for Devices and Radiological Health

Enclosure

## **Indications for Use**

**Extended Measurements AUDICOR System** 

510(k) Number (if known): <u>K051450</u>

Device Name:

Indications For Use:
The Extended Measurements System, when used with Audicor Sensors on the chest wall, is intended for use in acquiring, analyzing and reporting ECG and heart sound data and to provide interpretation of the data in an integrated COR report for consideration by physicians. In addition, the data can be presented in the format of real-time and trended display of cardiac indices derived from simultaneous ECG data and heart sounds data.
The Extended Measurements System can be used as an add-on device to work in conjunction with an Audicor-enabled device, or as a stand-alone electrocardiograph.
The interpretations of ECG and heart sound data offered by the device are only significant when used in conjunction with physician over read as well as consideration of other relevant patient data.
The device is intended for use only under the direct supervision of a physician, and is for use on adults ( $\geq$ 18 years).
Prescription Use X AND/OR Over-The-Counter Use (21 CFR 801 Subpart C)
(PLEASE DO NOT WRITE BELOW THIS LINE-CONTINUE ON ANOTHER PAGE IF NEEDED)
Concurrence of CDRH, Office of Device Evaluation (ODE)
Division of Cardiovascular Devices  510(k) Number <u>k 05 1450</u>